

WHAT IS CLAIMED IS:

1. A heat transfer element comprising:
a container having a heat input section for receiving heat generated by a heating element and a heat output section for radiating the heat outside, and composed of a resin containing a thermoconductive material; and
condensable working fluid that is vacuum-sealed in the container to transfer the heat received by the heat input section to the heat output section and that is moved between the heat input section and the heat output section by a capillary action member provided in the container.
2. A heat transfer element according to claim 1, wherein the thermoconductive material includes carbon nanotubes.
3. A heat transfer element according to claim 1, wherein the thermoconductive material includes graphite.
4. A heat transfer element according to claim 1, wherein the thermoconductive material includes insert-molded graphite sheets.
5. A heat transfer element according to claim 1,

wherein the thermoconductive material includes aluminum filler.

6. A heat transfer element according to claim 1, wherein the thermoconductive material includes aluminum nitride filler.

7. A heat transfer element according to claim 1, wherein the capillary action member includes grooves provided between the heat input section and the heat output section inside the container.

8. A heat transfer element according to claim 1, wherein the capillary action member includes a mesh member provided between the heat input section and the heat output section inside the container.

9. A heat transfer element according to claim 1, wherein the capillary action member includes knurls provided between the heat input section and the heat output section inside the container.

10. A heat transfer element according to claim 1, wherein the capillary action member includes sintered powder provided between the heat input section and the heat output

section inside the container.

11. An electronic device having a heat transfer element disposed in a casing of the electronic device to transfer heat generated by a heating element, wherein the heat transfer element comprises:

a container having a heat input section for receiving the heat generated by the heating element and a heat output section for radiating the heat outside, and composed of a resin containing a thermoconductive material; and

condensable working fluid that is vacuum-sealed in the container to transfer the heat received by the heat input section to the heat output section and that is moved between the heat input section and the heat output section by a capillary action member provided in the container.

12. A cooling device comprising:

a heat transfer element that receives heat generated by a heating element from a heat input section and that radiates the heat transferred from the heat input section to the outside from a heat output section;

a heat sink disposed adjacent to the heat output section of the heat transfer element to radiate the heat received from the heat output section; and

a fan that rotates to supply cooling air to the heat

sink,

wherein the heat transfer element comprises:

a container having the heat input section and the heat output section, and composed of a resin containing a thermoconductive material; and

condensable working fluid that is vacuum-sealed in the container to transfer the heat received by the heat input section to the heat output section and that is moved between the heat input section and the heat output section by a capillary action member provided in the container.

13. A cooling device according to claim 12, wherein the fan is disposed inside a housing that is formed integrally with the container.

14. An electronic device having a cooling device for performing cooling by radiating heat generated by a heating element to the outside, wherein the cooling device comprises:

a heat transfer element that receives the heat generated by the heating element from a heat input section and that radiates the heat transferred from the heat input section to the outside from a heat output section;

a heat sink disposed adjacent to the heat output section of the heat transfer element to radiate the heat

from the heat output section; and

a fan that rotates to supply cooling air to the heat sink,

wherein the heat transfer element comprises:

a container having the heat input section and the heat output section, and composed of a resin containing a thermoconductive material; and

condensable working fluid that is vacuum-sealed in the container to transfer the heat received by the heat input section to the heat output section and that is moved between the heat input section and the heat output section by a capillary action member provided in the container.

15. An electronic device according to claim 14, wherein the fan is disposed inside a housing that is formed integrally with the container.